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 Protective Glove

A Protective glove with an external layer from an heat-resistant textile fiber (17) with low heat conductivity, an intermediate layer (16) from cut and unassailable textile fiber as well as an heat-resistant interior lining (14) with a directional breathable liquid permeable diaphragm (15).

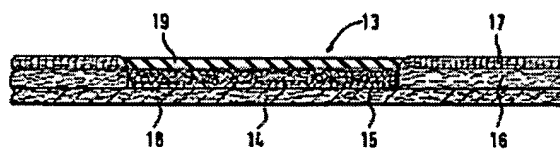


Fig. 3

### Description

The invention concerns a Protective glove, in particular for fire-brigade and disaster auxiliary applications as well as for emergency services.

Conventional fire-brigade gloves usually consist of leather and are provided in the area of the knuckle on the glove back with a reinforcement. These leather gloves exhibit pleasant carrying characteristics, but are not sufficiently temperature resistant and transmit heat relatively well on the skin. In addition the mechanical stability of the gloves is often not sufficient. When being busy with sharp-edged items, like fragments of glass, leather does not offer sufficient protection. Also liquid can penetrate, which for the wearer not only is unpleasant, but also a health endangerment as if chemicals or HIV infected blood penetrate through the leather gloves.

The invention is the basis the task, a glove, in particular for the fire-brigade application to create which avoids the disadvantages specified above.

The task is solved with a glove of the kind initially specified, which is according to invention by an external layer from an heat-resistant textile fiber by low heat conductivity, an intermediate layer from cut and unassailable textile fiber as well as an heat-resistant interior lining characterized by a breathable liquid-impermeable in one direction.

This Protective glove fulfills all safety claims of a fire-brigade glove. The external layer is heat-resistant and ensures by its low heat conductivity for the fact that the heat cannot be passed to

the glove inside. Cut and unassailable intermediate layer permits also a being busy with sharp-edged items, like broken windowpanes, sharp-edged sheet-metal parts and such things. The diaphragm on the interior lining, liquid-impermeable in a direction, prevents the penetration of liquids of all kinds, handicapped however not deriving from perspiring in the form of water vapor away from the body. In addition the diaphragm is breathable, so that altogether a high wear comfort of the glove results. The intermediate layer can be formed thereby from a fabric from Para aramide fibers, on which a fabric from aramide fibers is laminated as glove external layer. As fabric material here for example the material well-known under the trade name "kevlar" is applicable. The external layer can be formed for example from the aramide fiber fabric with the designation "Nomex". Nomex fabric was not so far applicable for gloves, since from this fabric at the seams fibers can easily dissolve. By the Lamination of this fabric on a Kevlar-fabric these disadvantages can be eliminated however, so that this fabric can be used now also for glove production. For the interior lining in particular one is generally suitable under the term "GoreTex" well-known diaphragm, which can be laminated with a heat-resistant material.

For the increase of the wear comfort an application from an elastic loop commodity from Para aramide fibers, which is silicone-coated on the exterior, can be intended on the glove inner surface and on the glove back in the area of the knuckle. The glove adapts itself then to all movements of the hand. The silicone coating ensures a high heatproof quality and a bad inflammability. Further advantages can be achieved by the fact that the glove can be provided with a long cuff, which protects also the lower arm. In addition for the better visibility of the wearer of the glove both on the glove back and at the cuff strips from a light-reflecting material can be applied.

In the following a preferential design example of a Protective glove according to invention is more clearly described using the drawing.

Show:

Fig. 1 a view on the back of a Protective glove;

Fig. 2 a view on the inside of the glove according to Fig. 1;

Fig. 3 an increased partial section along that Line III-III in Fig. 1.

The glove 10 after the Fig. 1 and 2 is a finger glove with a cuff 11, which extends the far beyond wrist. At the cuff 11 circulating strips 12 from a light-reflecting material are sewn on. Thus the wearer of the glove becomes better visible with darkness. On the glove back 10,1 is in the area of the finger joint an application of an elastic material 13, made of which also the glove inner surface is manufactured 10.2, intended. The material layer sequence of the glove 10 within the area of this application 13 as well as the adjacent material layer sequences are clarified in the sectional view in Fig. 3. The glove 10 exhibits an interior glove from an heat-resistant material 14, and which is covered with a diaphragm 15 breathable liquid-impermeable in a direction. The glove back, with exception of the application 13, as well as the cuff 11 consists of a Kevlar-fabric 16, on which a fabric from heat-resistant Nomex fabric 17 is laminated. In the area of the knuckle inset 13 as well as on the glove inner surface 10.2, where a higher elasticity of the material is required, that is replaced with Kevlar-fabric 16 by a Kevlar loop commodity 18, which is silicone-coated on their

exterior. This silicone coating 19 of the Kevlar loop commodity 18 provides for a good heatproof quality in particular cut and unassailable Kevlar knitted fabrics. By this material combination the glove according to invention fulfills all requirement of a fire-brigade glove, like low inflammability, heatproof quality, low heat conductivity, high cutting and stitch strength, water impermeability and breathability.

#### Patent claims

1. Protective glove, in particular for fire brigade of disaster auxiliary applications as well as for emergency services, characterized by an external layer from an heat-resistant textile fiber (17) with low heat conductivity, an intermediate layer (16) from cut and unassailable textile fiber as well as an heat-resistant interior lining (14) and with a breathable liquid-impermeable in one direction diaphragm (15).
2. Protective glove after claim 1, characterized by the fact that the intermediate layer (16) from a fabric is formed from Para aramide fibers, on which a fabric from aramide fibers as glove external layer (17) is laminated.
3. Protective glove after claim 1 or 2, characterized by the fact that on the glove inner surface (10.2) and on the glove back (10.1) in the area of the knuckle an application (13) from an elastic loop commodity (18) from ParaAramid fabric is intended, which is coated on their exterior with silicone (19).
4. Protective glove after one of the claims 1 to 3, characterized by the fact that on the glove back (10.1) a strip from a light-reflecting material is applied.
5. Protective glove after one of the claims 1 to 4, characterized by the fact that it is provided with a long cuff (11).
6. Protective glove after claim 5, characterized by the fact that on the cuff (11) a strip (12) from a light-reflecting material is applied.

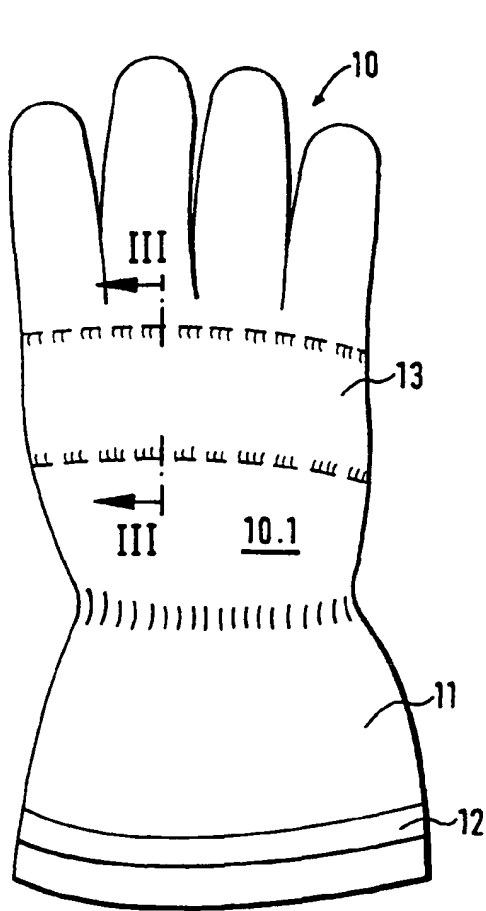


Fig. 1

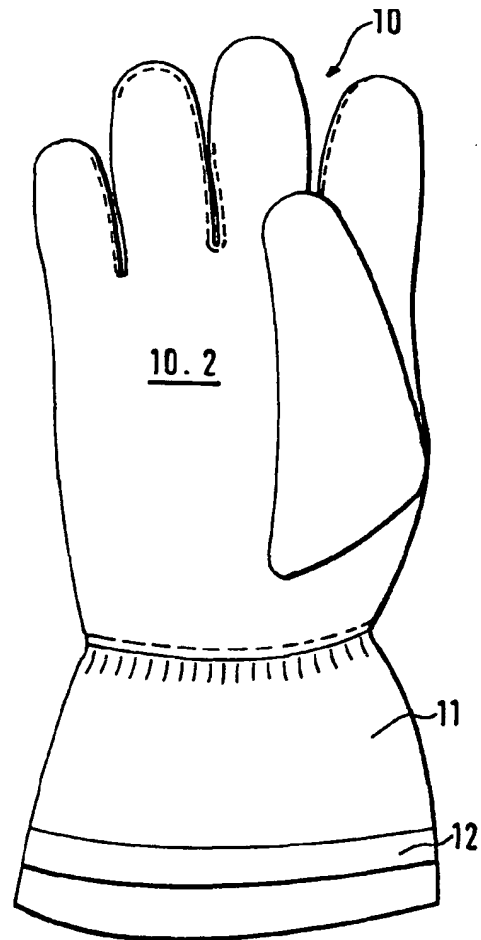


Fig. 2

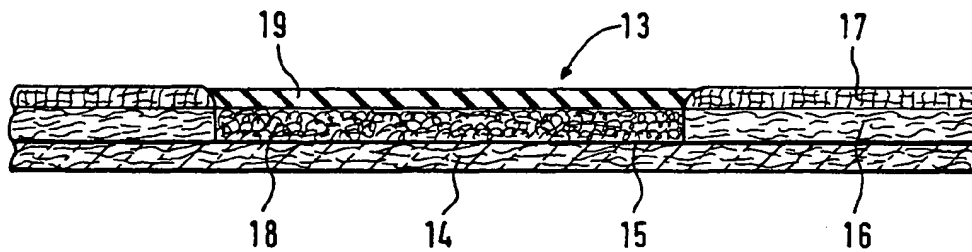


Fig. 3